

MAR 02 2005

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0851-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

31

Application Number

10/065,552

Filing Date

October 29, 2002

First Named Inventor

Shigeru Sawada

Art Unit

2814

Examiner Name

Wai Sing Louie

Attorney Docket Number

39.002-AG

**ENCLOSURES (Check all that apply)**

Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)

Reply to Missing Parts/  
Incomplete ApplicationReply to Missing Parts  
under 37 CFR 1.52 or 1.53

Drawing(s)



Licensing-related Papers



Petition

Petition to Convert to a  
Provisional ApplicationPower of Attorney, Revocation  
Change of Correspondence Address

Terminal Disclaimer



Request for Refund



CD, Number of CD(s) \_\_\_\_\_

☐ Landscape Table on CD

After Allowance Communication to TC

Appeal Communication to Board  
of Appeals and InterferencesAppeal Communication to TC  
(Appeal Notice, Brief, Reply Brief)

Proprietary Information



Status Letter

Other Enclosure(s) (please identify  
below):

Remarks

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name

Judge Patent Firm

Signature

Printed name

James W. Judge

Date

March 2, 2005

Reg. No.

42,701

**CERTIFICATE OF TRANSMISSION/MAILING**

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

Typed or printed name

James W. Judge

Date

March 2, '04

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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PTO/SB/17 (12-04v2)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).

**FEE TRANSMITTAL  
For FY 2005**☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180.00

**Complete if Known**

Application Number	10/065,552
Filing Date	October 29, 2002
First Named Inventor	Shigeru Sawada
Examiner Name	Wai Sing Louie
Art Unit	2814
Attorney Docket No.	39,002-AG

**METHOD OF PAYMENT (check all that apply)**☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): \_\_\_\_\_☐ Deposit Account Deposit Account Number: \_\_\_\_\_ Deposit Account Name: \_\_\_\_\_

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, except for the filing fee  
☐ Charge any additional fee(s) or underpayments of fee(s) under 37 CFR 1.16 and 1.17 ☐ Credit any overpayments

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

**2. EXCESS CLAIM FEES**

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
<b>Total Claims</b>	<b>Extra Claims</b>	<b>Fee (\$)</b>
- 20 or HP = _____ x _____ = _____		
<b>Indep. Claims</b>	<b>Extra Claims</b>	<b>Fee (\$)</b>
- 3 or HP = _____ x _____ = _____		
<b>Multiple Dependent Claims</b>		<b>Fee (\$)</b>
		<b>Fee Paid (\$)</b>

HP = highest number of total claims paid for, if greater than 20.

HP = highest number of independent claims paid for, if greater than 3.

**3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 = _____	/ 50 = _____	(round up to a whole number) x _____		

**4. OTHER FEE(S)**

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): 1.17(p) Submission of an Information Disclosure Statement

Fees Paid (\$)

180.00

**SUBMITTED BY**

Signature	Registration No. (Attorney/Agent) 42,701	Telephone 305-938-7119
Name (Print/Type) James W. Judge	Date March 2, 2005	

This collection of information is required by 37 CFR 1.135. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing this form, call 1-800-PTO-9199 and select option 2.

**MAR 02 2005****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

App. No. : 10/065,552 Confirmation No. 7687  
Applicant : Shigeru Sawada, et al.  
Filed : October 29, 2002  
Tech. Cntr./Art Unit : 2814  
Examiner : Wai Sing Louie

Docket No. : 39.002-AG  
Customer No. : 29453

Honorable Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

This constitutes an Information Disclosure Statement pursuant to 37 C.F.R. §§ 1.97 and 1.98. The attached documents listed on the accompanying Form PTO/SB/08A are hereby brought to the Examiner's attention in the patent application identified above.

**REMARKS**

Of the three presently submitted references, i.e., Cite Nos. F1 and O2 as listed on Form PTO/SB/08A, are not in English. These three references were cited in a communication from the Japanese Patent Office in a counterpart Japanese application.

**Concise Explanation of Relevance/Copy of Translation**  
**Pursuant to 37 C.F.R. § 1.98(a)(3)**

As a concise explanation of the relevance of the presently submitted Japanese-language references, an English translation of pertinent portions of the Japanese Patent Office communication—which was in Japanese Pat. App. No. 2001-340527, the foreign patent application on the basis of which priority is claimed in the present application—is submitted herewith.

03/03/2005 EKOLI1 00000002 10065552

App. No. 10/065,552  
IDS Submission dated March 2, 2005

(A copy of the Japanese Patent Office communication in its entirety, with borders drawn around the text containing the rejections, follows the English translation.)

Furthermore, a partial English translation of Cite No. F1 has been made available to Applicant's representative and is being submitted herewith. Borders have been drawn around the sections in the Japanese original text corresponding to the partial English translation.

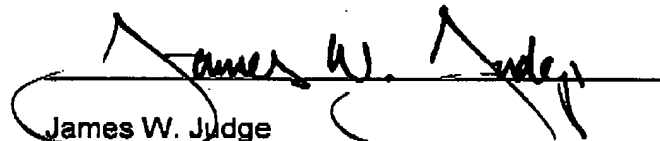
Furthermore, an English translation of the entirety of Cite No. O2 is attached to the back of the reference.

As the date on which the Japanese Patent Office communication citing the presently submitted information was November 16, 2004, an attestation under 37 C.F.R. § 1.97(e) cannot be made. Accordingly, a credit-card payment form authorizing payment of the fee under 37 C.F.R. § 1.17(p), together with a Fee Transmittal form, also accompanies this paper.

The Examiner is respectfully requested to consider these references, and to indicate so on the accompanying Form PTO/SB/08A and make the document of record in the present application.

Respectfully submitted,

March 2, 2005

  
James W. Judge  
Registration No. 42,701

**JUDGE PATENT FIRM**

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1

Reference No. 1011402

Dispatch No. 417632

Dispatch Date: November 16, 2004

Notification of Reasons for Rejection

Patent Application No.: Patent Application No. 2001-340527

Draft Date: November 10, 2004

JPO Examiner: Kenichiro HASHIMOTO 3031 4R00

Representatives/Applicant: Mr. Hisao FUKAMI (and four others)

Applied Law: Patent Law Section 29(2)

This application is rejected for the following reasons. An opinion, if any, should be submitted within 60 days from the dispatched date of the notification.

Reasons

3. The inventions in the claims listed below of the subject application should not be granted a patent under the provision of Patent Law Section 29(2) since it could have easily been made by persons with ordinary skill in the art to which the inventions pertain, on the basis of the inventions described in the following publications which were distributed in Japan or foreign countries or the inventions which were publicly available through electrical communication lines prior to the filing of the subject application.

Note (About the cited documents, etc., see the list of the cited documents, etc.)

Reason 3

- Claims 1 and 2

- Cited reference 1 (V. Gopal et al.)

- Remark

In cited reference 1, there is described (refer, in particular, to the item 'Experiment') that, when a C-V measurement is conducted by bringing an electrolytic solution into contact with an InAs membrane in order to obtain carrier density, an EDTA aqueous solution is used as the electrolytic solution. And it is publicly well-known in the C-V measurement to make the application voltage high to obtain the carrier density at a deep location. Thus, in the invention set forth in cited reference 1, those skilled in the art could have readily conceived of applying a voltage exceeding 10 V for the measurement of the carrier density of the InAs membrane at a deep location.

- Claim 4

- Cited references 1 and 2 (V. Gopal et al. & Toshiba Tech. Disclosure)

- Remark

In a C-V measurement using a liquid electrode, use of the tyron liquid as the electrolytic solution for the liquid electrode is well known, as is set forth, for example, in cited reference 2.



- Claim 5

- Cited reference 3 (Japanese Pat. App Pub. No. 50-86986)

- Remark

In cited reference 3 (refer to, in particular, p. 2, line 7 in the right lower column to p. 3, line 2 of the left upper column.), there is described that, in a C-V measurement, InSb is used as a sample, and that a liquid metal such as an In-Ga alloy, mercury, etc. is used as an electrode. Thus, in the invention set forth in cited reference 3, those skilled in the art could have readily conceived of using Ga, which is liquid around room temperature, as the electrode.

- Claims 7 and 8

- Cited reference 1 (V. Gopal et. al)

- Remark

Non-destructive estimation of carrier density means that the physical properties of the wafer itself do not change at all prior to and after the measurement. Accordingly, the wafer in the invention set forth in Claims 7 and 8 has no difference from the wafer that has been subjected to the C-V measurement according to the method set forth in cited reference 1, and also no difference from the bare wafer that is not subjected to the C-V measurement.

## List of the cited documents, etc.

1. V. Gopal et al., Journal of ELECTRONIC MATERIALS, 2000年11月, Vol. 29. No. 11, p.1333-1339
2. Collection of Toshiba Technology Disclosure, March 23, 1998, Vol. 16-17, p139
3. Japanese Patent Application Publication No. 50-86986

## Record of results of prior art search

## • Technical fields to be searched:

IPC 7<sup>th</sup> edition H01L 21/66

## • Prior art documents

Japanese Patent Application Publication No. 2001-144154

Japanese Patent Application Publication No. 59-143339

Japanese Patent Application Publication No. 11-337490

Japanese Patent Application Publication No. 61-141127

The record is not a component of the reasons for rejection.

If you have any questions regarding this Notification of Reasons for Rejection and/or would like to have an interview, please contact the following:  
Mr. Kenichiro Hashimoto of Electronic Materials Manufacturing Division,  
Third Patent Examination Department.

TEL : 03 (3581) 1101 (ext. 3469)

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